

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-9, 11-15, and 17-22 are pending. Claims 1-9, 11-15, and 17-22 stand rejected.

Claims 1, 4, 9, and 15 have been amended. Claim 3 has been cancelled. No claims have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

35 U.S.C. § 102 Rejections

The Examiner rejected claims 1, 2, 5 - 7, 9, 11 - 13, 15, and 17 - 19 under 35 U.S.C. § 102(e) as being anticipated by Song, U.S. Patent No. 6,049,880 (hereinafter "Song").

Applicants have amended claim 1 to indicate that a second output of a first stage has an output winding and a second stage has an input winding. The output winding of the first stage is connected to the input winding of the second stage through a two wire bus.

Amended claim 1 reads as follows.

A power supply circuit for a digital processing system, the circuit comprising:

a first stage having a first output coupled to a first component of the digital processing system and a second output which is different from the first output, wherein said second output has an output winding;

a second stage associated with a second component of the digital processing system, and having an input winding, wherein said input winding of said second stage is connected to said output winding of said first stage through a two wire bus; and

wherein said first stage drives said second stage using the second output, wherein the second stage transforms the second output to generate a third output to drive the second component, and wherein the first output is independent of the second stage.

(Amended claim 1) (emphasis added)

The Examiner acknowledges that Song “ does not explicitly teach that the stages are coupled to each other by a two wire bus” (Office Action 03/01/05, p. 6).

Song discloses a universal serial bus system with a primary power supply and a hub power supply. The primary power supply supplies power to the hub power supply through universal serial bus (col. 4, lines 49-52).

More specifically, Song discloses

In FIGS. 2 and 3, the switching regulator 32 is provided in order to control the supply of a hub power supply voltage from the primary power supply 24 to the universal serial bus hub ports 46, 47 and 48. The power supplied from the primary power supply 24 to the universal serial bus hub ports 46, 47 and 48 is a direct current power. The hub power supply voltage is supplied to the universal serial bus hub ports 46, 47 and 48 in order to supply voltage to universal serial bus peripheral devices (not shown) plugged into ports 46, 47 and 48.

(Song, col. 5, lines 47-54) (emphasis added)

Significantly, Song discloses

Referring now to FIG. 3, which illustrates a detailed circuit diagram of the hub power supply of FIG. 2, according to the principles of the present invention. The hub power supply 26 includes a switching regulator 32, a filter circuit 34 composed of capacitors C11 and C12, and a hub power detection circuit. The hub power detection circuit is comprised of a plurality of port power detecting circuits 36, 37 and 38 respectively corresponding to the hub ports 46, 47 and 48.

(Song, col. 6, lines 42-50) (emphasis added)

Thus, Song merely discloses supplying a power from the primary power supply to the hub power supply devices through universal serial bus hub ports of the hub power supply, wherein the hub power supply includes a switching regulator, a filter circuit, and a hub power detection circuit, and does not disclose that an output to the hub power supply of the primary power supply has an output winding, and a hub power supply has an input winding, and that the output winding is connected to the input winding through a two wire bus, as recited in amended claim 1. Accordingly, Song fails to disclose, teach,

or suggest the limitation of amended claim 1 of the input winding of the second output of the first stage connected to the output winding of the first stage through a two wire bus.

Because Song does not set forth all the limitations of amended claim 1, Applicants respectfully submit that amended claim 1 is not anticipated by Song under 35 U.S.C. § 102(e).

Because independent amended claim 9 and 15 contain at least the same limitation as set forth with respect to amended claim 1, Applicants respectfully submit that amended claims 9 and 15 are also not anticipated by Song under 35 U.S.C. § 102(e).

Given that claims 2, 4-8, 11-14, and 17-22 depend respectively from amended independent claims 1, 9, and 15 and add additional limitations, Applicants respectfully submit that claims 2, 4-8, 11-14, and 17-22 are also not anticipated by Song under 35 U.S.C. § 102(e).

35 U.S.C. § 103 Rejections

The Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Jansen, U.S. Patent No. 5,835,360 (hereinafter referred to as “Jansen”). The Examiner rejected claims 8, 14, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Applicants’ Admitted Prior Art (AAPA).

As discussed herein above, Song fails to disclose, teach, or suggest the limitation of amended claim 1 of the input winding of the second output of the first stage connected to the output winding of the first stage through a two wire bus.

AAPA also fails to disclose, teach, or suggest such limitation of amended claim 1.

Jansen discloses a switched mode power supply having two output circuits, wherein a first output circuit is configured as a buck regulator and a second output circuit is configured as a flyback converter. More specifically, Jansen discloses

In the first embodiment of the invention shown in FIG. 3, a switched mode power supply has a first output circuit 31 configured as a buck regulator with the input power being chopped by a switching device 34 and fed to an inductive component having a winding 36 wound on an energy-storing magnetic core. Buck regulators are well known in the art and operation of output circuit 31 will therefore not be described in detail. The output circuit 31 has its output voltage regulated by feedback from its line output to a control circuit 35 that serves to adjust the duty cycle of the switching device such as to keep the output voltage of circuit 31 substantially constant.

A second output circuit 32 is formed as a flyback converter by having a winding 37 jointly wound with winding 36 on the same energy-storing magnetic core. The winding 36 acts as a transformer primary winding and winding 37 acts as a transformer secondary winding to form the energy-storing transformer of the flyback converter. Again, flyback converters are well known in the art and operation of output circuit 32 will not be described in detail.

The first and second output circuits 31, 32 have a common zero volts output line.

(Jansen, col. 3, lines 45-67) (emphasis added)

Jansen, in contrast to the presently claimed subject matter, merely discloses that the winding of the first output circuit acts as a primary winding and the winding of the second output circuit acts as a secondary winding of the transformer (Figure 3) of the flyback converter. Jansen, however, fails to disclose, teach, or suggest that the input winding of the second output of the first stage is connected to the output winding of the first stage through a two wire bus, as recited in amended claim 1 (Jansen, Figures 3-6).

Thus, neither Song, Jansen, not AAPA discloses, teaches, or suggests such limitation of amended claim 1.

Consequently, even if Song, Jansen, and AAPA were combined, such a combination would lack such a limitation of amended claim 1.

Therefore, Applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103 (a) over the references cited by the Examiner.

Amended independent claims 9 and 15 at least include the limitation discussed above with respect to amended claim 1.

Therefore, Applicants respectfully submit that amended independent claims 9 and 15 are also not obvious under 35 U.S.C. § 103 (a) over the references cited by the Examiner.

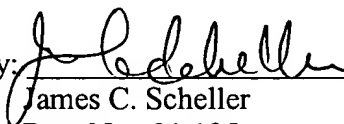
Because claims 2, 4-8, 11-14, 17-22 depend, directly or indirectly, from respective amended independent claims 1, 9, and 15, and add additional limitations, Applicants respectfully submit that claims 2, 4-8, 11-14, 17-22 are likewise not obvious under 35 U.S.C. § 103 (a) over the references cited by the Examiner.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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